

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016494**Date Inspected:** 16-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Qiu Wen**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower & OBG Components**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials Quality Assurance Inspector, Sandeep Kumar (QA) was present during the times noted above for observations relative to the work being performed.

**BAY#10**

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 5B located on South tower Lift-5 Grillage Assembly SSD1 – TL5 – 1B/F. Welder is identified as 057220. ZPMC Quality Control (QC) Inspector is identified as Li Peng Fei. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – TC – U5b.

Weld joint # 12 located on North tower Lift-5 Grillage Assembly NSD1 – TL5 – 3B/F. Welder is identified as 068091. ZPMC Quality Control (QC) Inspector is identified as Li Peng Fei. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – TC – U5b.

Weld joint # 10 located on South tower Lift-5 Grillage Assembly SSD1 – TL5 – 1B/F. Welder is identified as 044504. ZPMC Quality Control (QC) Inspector is identified as Li Peng Fei. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – TC – U4c.

Weld joint # 15 located on South tower Lift-4 Mounting plate CAMPSA-4. Welder is identified as 040521.

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ZPMC Quality Control (QC) Inspector is identified as Li Jun. The welding variables recorded by QC appeared to comply with the WPS – B – P – 2112.

### ORTHOTROPIC BOX GIRDER (OBG) AT BAY#10

This QA Inspector observed the following work in progress

Fluxcored Arc Welding (FCAW):

Weld joint # 150 located on Bike Path panel Assembly BK004A7– 027. Welder is identified as 057160. ZPMC Quality Control (QC) Inspector is identified as Yang Ming Ming. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2133.

### BAY#11

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 006406

Ultrasonic Testing (UT)

This QA inspector performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report for this date. The member is identified as OBG Component. The weld designations reviewed are as follows:

BIKE PATH

BK004A – 021 – 009

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 36 located on West tower Lift-5 Grillage Assembly WSD1 – TL5 – 4B/F. Welder is identified as 066163. ZPMC Quality Control (QC) Inspector is identified as Xu Jie. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3313 – TC –P5.

Weld joint # 10 located on East tower Lift-5 Grillage Assembly ESD1 – TL5 – 2B/F. Welder is identified as 046769. ZPMC Quality Control (QC) Inspector is identified as Xu Jie. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – TC –P5.

### ORTHOTROPIC BOX GIRDER (OBG) AT BAY#11

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Repair welding of weld joint # 09 located on Bike Path plate BK004C1– 024. Welder is identified as 053316. ZPMC Quality Control (QC) Inspector is identified as Yu Dong Ping. The welding variables recorded by QC appeared to comply with the WPS – 345 – SMAW – 1G (1F) – Repair.

### BLAST SHOP

EXTERNAL PRE-BLAST INSPECTION OF NORTH TOWER LIFT-2 FROM 83 M TO 77 M ELEVATION

During the External pre-blast visual inspection on East tower Lift-2, this Quality Assurance Inspector (QA) discovered the defects required welding and Magnetic particle testing on weld and base material at the following locations:

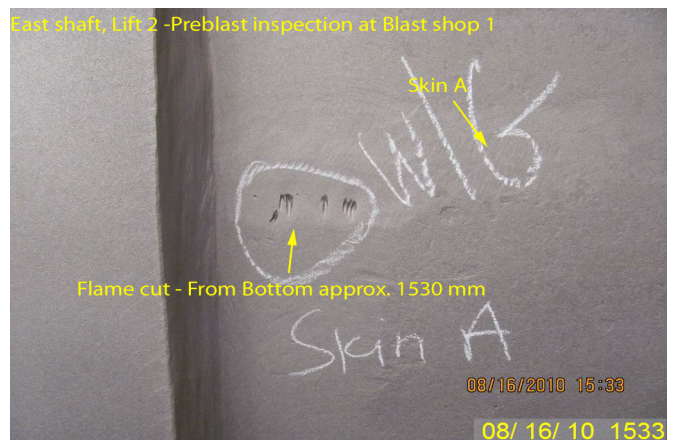
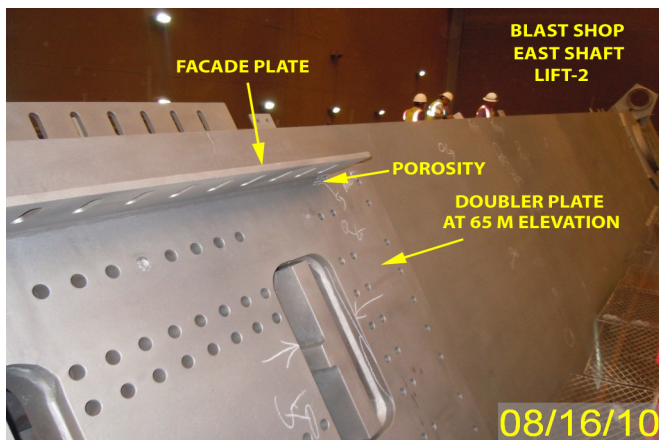
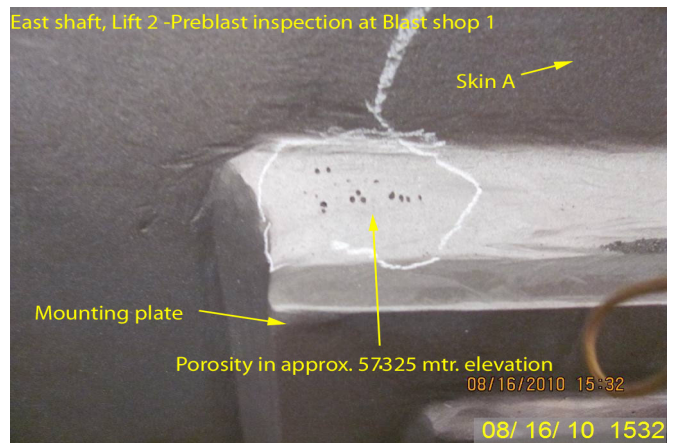
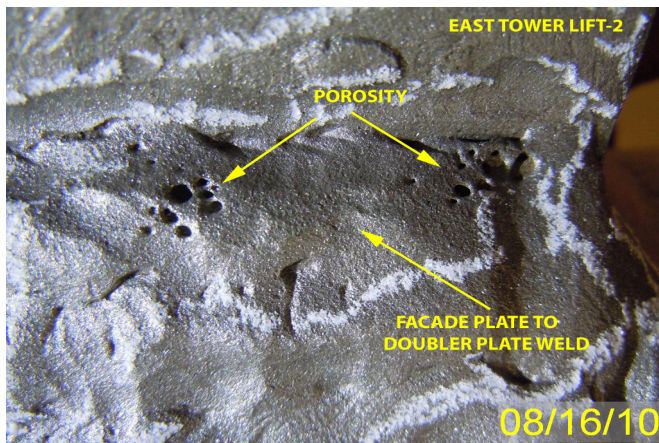
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- 1) Skin 'A' – Flame cut – 1530 mm from bottom and 620 mm from A/E corner.
- 2) Skin 'A' – Arc Gouge – 1535 mm from bottom and 50 mm from A/B corner.
- 3) Skin 'A' – Arc Gouge – 1535 mm from bottom and 450 mm from A/B corner.
- 4) Skin 'A' – Porosity – 2nd Mounting plate from bottom at 57.325 M elevation.
- 5) Skin 'A' – Porosity – Façade plate to doubler plate weld at 65 M elevation.
- 6) Skin 'B' – Arc Gouge – 59 meter elevation, 1000 mm from B/C corner.
- 7) Skin 'D' – Arc Strike – 65 meter elevation.
- 8) Skin 'D' – Arc Gouge – 1000 mm from bottom and 200 mm from D/E corner.
- 9) Skin 'D' – Flame cut – 64 meter elevation, 140 mm from D/E corner.
- 10) Skin 'E' – Arc Gouge – 150mm from bottom and 100 mm from D/E corner.
- 11) Skin 'E' – Arc Gouge – 56 meter elevation, 430 mm from D/E corner.
- 12) Skin 'E' – Flame cut – 64 meter elevation, 95 mm from D/E corner.
- 13) Skin 'E' – Arc Gouge – 55 meter elevation, 100 mm from A/E corner.

For further information, please see the attached pictures below.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



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### Summary of Conversations:

No Relevant Conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Michael Ng - 15921845703, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Kumar,Sandeep	Quality Assurance Inspector
<b>Reviewed By:</b>	Clifford,William	QA Reviewer

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